SEPTEMBER, 1959





Stream insects and other small aquotic onimals make up the bulk of the brook trout's diet. Here National Audubon Society photographer W. T. Davidson cotches a brookie going ofter a yellow butterfly. Trout fishing is still going strong in Virginia and will continue through December 31.

VIRGINIA WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting, Fishing and Outdoor Recreation in Virginia

COMMONWEALTH OF VIRGINIA



J. LINDSAY ALMOND, JR., Governor Commission of Game and Inland Fisheries

COMMISSIONERS

ADMINISTRATIVE OFFICERS

 VOL. XX SEPTEMBER, 1959 NO. 9

In This Issue

l'AGI
Editorial
The \$3 Duck Stamp
Commission Sets Rail, Dove and Woodcock Seasons .
Love That Honeysuckle!
Cumberland Gap National Park
A Checklist of Virginia's Mammals, Birds, Reptiles and Amphibians
Attention Dove Hunters!
What It Is, What It Does and Why—The Virginia Commission of Game and Inland Fisheries 18
Bird of the Month: The Nighthawk
Commission Field Force Notes
The Drumming Log
Youth Afield
Letters and Comments
Announcement of 13th Annual Wildlife Essay Contest 28

Cover

Ed Bierly of Lorton, Virginia, painted this month's four-color cover of a pair of pileoted woodpeckers on a pine snag. Both birds—olmost the size of crows—hove a red crest, but in the female (right) it does not include the forehead. The female also lacks the red streaks along the side of the throat. Mountaineers call them "woodcock."

PUBLICATION OFFICE: Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia

J. J. SHOMON, Editor
M. R. CUTLER, Associate Editor
L. G. KESTELOO, Photography
FLORENCE BLANKENSHIP, Circulation

SUBSCRIPTIONS: One year, \$1.00; two years, \$1.50; three years, \$2.00. Remittances by check or money order to be made payable to the Treasurer of Virginia. Local game warden will accept subscriptions or they may be forwarded direct to Commission of Game and Inland Fisheries, 7 North Second Street, Richmond 13, Virginia.

VIRGINIA WILDLIFE is published monthly at Richmond 13, Virginia by the Commission of Game and Inland Fisheries, 7 North Second Street. All magazine subscriptions, change of address notices, and inquiries should be sent to the Commission, P. O. Box 1642, Richmond, Virginia. The editorial office gratefully receives for publication news items, articles, photographs, and sketches, of good quality, and other materials which deal with the wise use and management and study of Virginia's inter-related, renewable resources: soils, water, forests and wildlife. Because of pressure of editorial duties, however, the Commission cannot be held responsible for unsolicited manuscripts and illustrative material. Since wildlife is a beneficiary of the work done by state and federal land-use agencies in Virginia, editorial policy provides for full recognition of their accomplishments and solicitations of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given the Virginia Commission of Game and Inland Fisheries and Virginia Wildlife and proper clearances are made with authors, photographers, artists and publishers.

SCHOOL AGAIN . . . and some questions for parents

PARENTS watching their children trot off to school this mouth are apt to greet the occasion with mixed emotion. Some will be saddened to see their sons and daughters leave—even for a few hours a day—for the ties that bind a happy, well-knit family are always strained when loved ones are apart.

Others will view "school days again" with impassionate attention or indifference for it matters little to them whether the kids go back or not. Junior's not learning much anyway so why get excited? He hopes only to be a mechanic and what's school to him?

Finally there will be a small group that will exclaim "Happy Day! It has been a long summer and it's good to have the children away from under one's feet." Such attitudes do not necessarily mean malicious good riddance but signify merely temporary relief in knowing that it's good to have the children away for a change.

The impartial observer watching the parade of young humanity toward the yellow buses and into the school buildings is prone to pause, perhaps even ponder, over the ageless old question: What kind of a new society are we building? Are we who are viewing "school days again" with sorrow or apathy or relief giving this question serious thought? If not, is it time we did so, and what time is better for a little soul-searching than in the quiet of the home when the children are away or asleep? Have we done right by them during the summer months? Have we guided them properly, associated with them sufficiently, molded their character? Have we taken time out to instruct them in the finer and simpler things of life and in the traits that make for true womanhood, manhood?

How many of us have taken our sons or daughters or both on a hike or camping trip or fishing jaunt?

Have we taken them out at night and told them about the stars and Saturn and Venus and Jupiter? Have we told them about the millions of tiny chemical mills in the leaves of green plants and how a tree grows? Have we showed them the beauty of the delicate wildflower in the woods and of the symmetry of the bird nest in the rosebush?

How many of us grown-ups have taken time out to teach our young people something about kindness and respect and love for the things of the Earth? How about natural laws?

A look around our littered countryside or around correctional institutions and law enforcement offices and courts shows we have not done enough of these things. Too many youngsters are going to school this September without having been given the right kind of tutelage by their parents. No, parents have been too busy, or too tired, or too preoccupied with their own notions of fun and

entertainment to spend time with them. The refrain is, Leave it to someone else; leave it to the schools to teach discipline and good habits; leave it to the Sunday school to tell them about love.

What fools we are to think we can raise a generation of creditable Americans and still neglect the proper influence of the home. How wrong we are if we think we can instill citizenship responsibility in our young people and then not train them for it. The old traisms still apply: As the twig is bent the tree grows; train up the child in the way he should go, and when he is old he will not depart from it. Neglect him and he will show neglect.

It is interesting when one observes children and sees their behavior to speculate on the kinds of homes they come from. As one can see by the vitality of an oak tree the quality of the acorns it produces, so one can tell the character of the parent from the child.

Some readers may inquire without much thinking what all this has to do with conservation. Only this: Conservation is dead unless it also includes a way of thinking and behaving toward the things of the earth. Yes, the term is a meaningless abstraction unless it involves the proper attitudes and thoughts and actions of people. And how are proper thoughts and attitudes to be formed if they are not to be formed in the molding place of character—the home.

There is a popular tendency today to shift the responsibilities for our ills onto schools. But it must be remembered that schools are only institutions and can only do for a child what the soil or climate can do for an oak tree. The oak seedling will grow better in one site as compared to another, but the tree itself will become essentially what the acorn was when it was shed by the parent tree.

The America of tomorrow is the youth of today. If we shape the mind and character and will of the young of today, we need not worry too much of the tomorrow. If we want America to remain beautiful, we must create the feeling and the will in people to keep it that way and this attitude must be created early in life.

And parents should not be distraught or discouraged at apparent early failures. Out of despair and discouragement often comes hope. One need only go back fifteen centuries and read how the heart of a mother was wrenched with sorrow over a wanton boy, and St. Ambrose said: "Weep not, Mouica; the child of so many tears cannot perish."

And that wanton boy when he grew up, believe it or not, was none other than the kind and learned St. Augustine—one of history's great and noble men and whose remarkable "Confessions" are classic. Every American parent ought to read them before his children grow up or before he dies. —J. J. S.



This fall waterfowlers will find that the price of the federal duck stamp has jumped from two dollars to three dollars.

Director Janzen tells why this fee increase was considered necessary.

By D. H. JANZEN, Director Bureau of Sport Fisheries and Wildlife United States Department of the Interior

WELCOME very much this chance to talk about the new \$3 duck stamp legislation and what we hope it will accomplish. But first, why a \$3 duck stamp? Two years ago a task force of Service employees, representing a cross-section of field and Washington personnel, was assigned the job of determining the most important needs facing fish and wildlife in the field of federal responsibility. Advice and recommendations were sought from all possible sources, including state conservation departments, national conservation organizations, federal agencies, etc.

Of the many national problems considered, the one involving preservation of our wetlands stuck out like a sore thumb. It was quite obvious that the steadily continuing loss of our potholes, marshes, and small lakes, so necessary for migratory waterfowl and other aquatic wildlife, was a problem of first magnitude requiring solution if duck hunting was to continue as a national sport.

At about the same time, many conservationists were becoming quite critical of the federal government for utilizing such a high percentage of the \$2 duck stamp receipts for refuge development and maintenance, law enforcement, waterfowl surveys and research, and other waterfowl management needs. It was the opinion of these men that duck stamp receipts should be used for wetland acquisition as originally intended, that the acquisition program should be greatly stepped up and that other waterfowl management functions should be financed by direct federal appropriations.

Quickly responding to this public sentiment, the Department of the Interior, under the direction of Secretary

Address given at the annual meeting of Outdoor Writers Association of America, Hot Springs, Arkansas, June 8, 1959.

Fred A. Seaton, proposed legislation that all of the receipts should be earmarked for land acquisition. The final result was the passage of amending legislation which earmarked all of the duck stamp receipts for land acquisition, raised the price of the duck stamp to \$3, authorized the opening to hunting of not to exceed 40 percent of any national wildlife refuge, and excepted the purchase of small production areas from the provisions of the Migratory Bird Conservation Act. Three different effective dates were listed in the legislation—the hunting provision to become effective immediately, the \$3 duck stamp effective beginning with the 1959 hunting season, and the mandatory earmarking effective July 1, 1960.

And now for the program the Service expects to follow in carrying out the provisions of this Act.

For about two years the four waterfowl flyway councils, on which all 48 states are represented, have been working on master flyway management plans in close cooperation with the Service. A part of each of these plans provides for a wetland acquisition and preservation program. As a result, we anticipate that very shortly we will have a rather complete list of wetland areas which, in the opinion of the states, should receive the highest priority consideration. In some flyways wintering grounds will receive preference, while in others the breeding grounds seem most important. Our Service is now in the process of examining the first projects submitted for biological, engineering, and acquisition feasibility. Some undoubtedly will not be practical for further consideration, but those that appear to meet the necessary qualifications will be presented to the Migratory Bird Conservation Commission, which, under the law, must pass on all projects except the small production areas on the waterfowl breeding grounds.

SEPTEMBER, 1959 5

We are generally giving the highest priority to those wetlands that appear to be in jeopardy from agricultural drainage or other inroads of eivilization. In some eases we may recommend the purchase of areas already drained which appear practical for restoration, but generally speaking these will have to have a lower priority since we have no assurance as to when funds will be available for the restoration work.

We see many serious problems faeing us in carrying out this program. Already it is quite apparent that the eonversion of lands from private to public ownership, and thus removing them from the tax rolls, is going to meet with the opposition of local taxing units in many areas. There is no provision in federal law for payments in lieu of state or local taxes. Fortunately, however, the federal laws under which we operate do provide for paying 25 percent of general refuge receipts to countics for schools and roads. On many refuges the income from fur trapping, grazing, agricultural sharecropping, forest products, etc., provides enough income to more than compensate for taxes lost, but on the other hand there are many refuges where there is little income, and we anticipate that on many of these new areas there will not be much income for a period of years.

Reaching price agreements is always a difficult problem, especially where wetlands are concerned. Speculative values involving agricultural potentiality if the land were to be drained, prospective urban development, prospective hunting club values, etc., greatly complicate the land appraisal picture. Negotiation costs undoubtedly will be quite high.

In the prairie pothole production areas where we are fast losing some of the best waterfowl breeding grounds left in the United States, we are faced with preserving small areas out of existing farms. It is obvious we cannot purchase entire farms, and it is also obvious that in many, if not in most cases, the farmer will not sell small areas out of his farm. We are therefore working on a plan of

eombination purchase and lease which we hope will result in the preservation of these important wetlands.

Now, where does the program stand as of today? We have a problem, and a most serious one—one we have not planned on, although we knew it might always occur. In anticipation of stepping up our acquisition program from around one and one-half million dollars a year to one running between six and seven million dollars, we have worked hard in getting a backlog of projects approved by the Migratory Bird Conservation Commission, and securing options on as much land as rapidly as possible, because every year our purchase opportunities for wetlands are decreasing, and we will have to pay more for the lands we can buy. As a result we now have options on enough land to obligate all of the funds made available to us for this coming fiseal year. We had anticipated requesting the Department and the Bureau of the Budget to release an additional two million dollars of the \$3 receipts as they became available this fall, so we could continue to agguire the most important parcels as rapidly as possible.

Unfortunately—and this is our problem—Mother Nature, in the form of a severe drought in the duck production center of the Canadian provinces and in the Dakotas, is very likely going to force us to curtail the hunting season this fall, which undoubtedly will directly affect the sale of duck stamps, and we now fear that the reduction in receipts will be serious enough to practically stop all further optioning for the next twelve months. Already we are getting a loud reaction from some of our field offices who have been working hard on this program and now have to give up the immediate acquisition of wetlands, some of which may be converted to the plow before purchase offers can be made.

I see no solution. We can always hope some miracle will oceur on the prairies and that an average production will be forthcoming, but frankly I feel the chances are very slim. The millions of potholes on which the bulk of our nesting birds depend have been steadily shrinking

Game ogency administrators from the states along the eostern seabaard, who make up the Atlantic Waterfowl Cauncil, met with U. S. Fish and Wildlife Service officiols of Virginia Beach May 6 and 7 to hear reports an the duck population, recammended to the service various changes in the federal duck hunting laws, and set up a land acquisition priority schedule.





Concentrations of waterfowl, such as this mallard flock on the Lower Souris National Wildlife Refuge in North Dakota, indicate how dependent waterfowl are on the presence of protected marsh habitat. All of the proceeds fram the sale of the three-dollar duck stamp will be used for the purchase of wetlands.

U. S. Fish and Wildlife Service Photo

in numbers during the past two years, and this past dry winter with no runoff this spring is putting the finishing touches on most of the remainder. Some of the Canadian pothole section has already been written off by our biologists, and the situation is equally bad in the United States portion of this duck factory. Our wetlands preservation biologists stationed in North and South Dakota are estimating that in these two states 80 percent of the potholes which normally have water in them at this season of the year are dry.

The picture is not good, and if it does not improve much more than we can now foresce, we will have no choice but to recommend severe restrictions on waterfowl hunting this fall.

We still hope that Mr. Duck Hunter will have enough

faith in the future of this sport to contribute his \$3 for a duck stamp even though the hunting prospects this fall look pretty grim. This \$3 investment in wetlands is an insurance payment against the permanent retirement of his duck hunting equipment and his dreams of future duck hunting trips for himself and for those who come after him

The waterfowl habitat picture I have painted may look pretty dark, but there is absolutely no question in my mind but that unless we are successful in greatly slowing up the wetlands loss trend of the past 15 years, duck hunting as we now know it will rapidly become only a memory for most of those participating in this sport today. The American public in the final analysis will have to determine whether it wants to pay the price.

Commission Sets Rail, Dove and Woodcock Seasons

The Commission of Game and Inland Fisheries, working within a regulation framework set up by the U. S. Fish and Wildlife Service, set the seasons and bag limits for the taking of doves, rails, gallinules and woodcock in Virginia at its meeting on July 24 in Hot Springs.

Mourning doves may be hunted from 12 o'clock noon until sunset cach day between September 15 and November 18, inclusive. Bag limits remain 10 a day, 20 in possession.

The season for taking clapper rails and gallinules opens September 12 and closes October 31. Bag limits are 15 rails and gallinules a day and 30 in possession.

Sora season extends from September 12 to October 31. Sora bag limits are 15 a day, 30 in possession. This is a reduction in the daily bag limit; a limit of 25 was in force last year.

Woodcock season opens with the general hunting season on November 16 and extends through December 25.

Bag limits arc 4 a day, 8 in possession.

Legal hunting hours for the rails, gallinules, sora and woodcock extend from one-half hour before sunrise to sunset each day. Hunting on Sunday is prohibited statewide

Principal changes this year nation-wide include a reduction of 20 days in the rail season for the Mississippi and Central Flyways on account of the drought; an increase of one day in the white-winged dove season in Texas in view of a substantial increase in this year's white-winged dove breeding population in that State; a reduction in the bag and possession limits on sora; and a reduction in daily bag and possession limits on brant in Alaska because of a significant decline in the brant population in the Pacific Flyway.

Detailed regulations for the hunting of migratory water fowl, coots, and Wilson's snipe in the United States are not issued until late in August.

SEPTEMBER, 1959

Love That Honeysuckle!

By C. H. SHAFFER

Supervising Game Biologist

NE of the most cussed and discussed plants in the state of Virginia is Japanese honeysuckle (Lonicera japonica). This perennial plant, which was introduced into the United States from eastern Asia, is found throughout most regions of the state but is most abundant in piedmont and eastern Virginia. Practically everyone is familiar with this climbing vine that spreads so rapidly along fencerows and into the edges of fields. Its ovate leaves, pink-white-yellow fragrant bloom and its blue-black berries are its distinguishing characteristics.

To our knowledge there is no other plant in the state that creates more controversy among farmers, foresters, and gardeners. Depending upon their particular interests or prejudices, some people would like to see honeysuckle completely removed from the flora of the state. Conversely, other people recognizing its advantages are release-cutting, fertilizing and even transplanting in the hope of increasing the range and growth rate of this perennial vine. Honeysuckle, it seems, illustrates well that old adage which we are prone to use in discussing people: "There is a little bit of good in the worst of us and a great deal of bad in the best of us." In this article we shall attempt to discuss both sides of the honeysuckle issue by pointing out the obviously undesirable as well as the desirable features of this controversial plant.

Among rural dwellers it is not unusual to hear such statements as, "It looks like honeysuckle is fixin' to take the county"; or, "So and so is getting to be a bigger pest than honeysuckle"; or again, "Our county is being overrun by Yankees and honeysuckle." All of these expressions emphasize some of the less commendable features of this hardy plant. It is tenacious. It is often a pest. It is prolific. It has a tendency to spread rapidly into fallow land. It will invade gardens, shrubs and trees and soon become the dominant plant which will either suppress the growth or kill the more desirable plants. It will often get started on a fencerow and soon its heavy growth and weight will render the fence useless. It is not unusual to see seedling pine trees completely throttled and suppressed by this plant.

It has been observed that one of the main reasons why many shrub lespedeza plantings have become ineffective for quail food in Virginia has been the invasion of these borders by honeysuckle. Apparently it actually will survive where some other plant life will perish, and the plant is tolerant to most of the conditions present in the state. It will grow in the shade and in most types of soil. Apparently it does not require a great deal of moisture and often will flourish even during periods of drought. Thus the main criticism of the plant is derived from the fact that once established, unless it is controlled, it will tend to completely dominate more desirable forms of vegetation.

Honeysuckle is a pest that interferes with the horticulture

8

of other forms of plant growth. Yet it is not too difficult to control the growth of honeysuckle if you so desire. Naturally, cultivation or repeated mowing will keep it under control. Constant grazing by livestock will tend to suppress its growth and finally kill it. Perhaps the most effective control, however, is spraying with chemicals. Certain commercial weed and brush killers will destroy and control honeysuckle for a period of time. However, it may be necessary to repeat the spraying operation since runners will be put out from any plant in the surrounding territory and the sprayed areas will again become infected.

But, "We come to praise honeysuckle, not to bury it." In our perhaps biased opinion, honeysuckle is one of the most valuable plants which grows in our bountiful state. Its contributions to soil protection, the excellent food and cover for birds and animals that it produces, its esthetic values and other features we feel more than compensate for its dubious qualities.

We have often heard the opinion of some professional agriculturists that piedmont Virginia's fallow land has been saved from complete erosion by honeysuckle, broom sedge and scrub pines. After a field has lain fallow for several years it is a safe bet that all three of these common species will soon appear. The longer the field lies dormant the greater will be the possibility that it will be covered by the dominant honeysuckle. If you are interested, just observe how soon honeysuckle will invade a freshly bulldozed area in your neighborhood. These tenacious, hardy, spreading tendencies are the features that have made it such a valuable assistant in covering the ground and in keeping the top soil from eroding down into our streams and rivers. Its extremely long runners and its root system are ideally suited for its role as a soil conservationist.

Farmers have long recognized the value of honeysuckle for supplementary grazing. It is not unusual to find low grounds and other areas where honeysuckle abounds fenced in order that the livestock can take advantage of this prolific plant. Honeysuckle is commonly grazed when normal pastures are non-productive during periods of drought and when snow covers the ground in winter. This vinc, as we all know, is not confined to the ground level alone, but is inclined to grow up and over any surrounding shrub or tree, thus its leaves are available for grazing during even the deepest of snows.

Still another value of this unusual plant which we do not often recognize is that intangible quality we sometimes call esthetic value. What is more beautiful in the spring of the year than a blanket of green honeysuckle covered with thousands of blooms of pink and white flowers? Perfume manufacturers couldn't go too far wrong in attempting to recreate the fragrant odor of these fragile blooms. Surely few of our native plants can add as much beauty and fragrance



Heoding for the honeysuckle, this sportsman knows that quail and robbits as well as deer and turkey utilize "honeysuckle cofeterios" heavily.

Commission Photo by Kesteloo

to our May and June days and nights as does honeysuckle!

Probably there is no other group of individuals who appreciate the value of honeysuckle any more than do our wildlife managers who every day can observe the many contributions of this plant to the welfare of most of our common game birds and animals. Sportsmen should recognize this plant to be one of the most helpful plants in Mother Nature's storehouse, and, therefore, one of their best friends. Surely without the literally thousands of acres of food and protective cover provided by this vine there would be far less wildlife available for harvesting through hunting each year! If you are dubious about the value of honeysuckle for wildlife, just start checking crop and stomach contents of the game you bag and observe the habitat from which the animal or bird was taken.

Most convincing of all to any nature lover would be a field trip through your favorite hunting territory whenever snow covers the ground and our wildlife is hard pressed. It's a safe gamble that most of the birds and animals (or the signs of these) that you observe will not be too far from our old climbing friend. If you follow the tracks of a deer, a rabbit, a covey of quail or a gang of turkeys far enough through the snow, you will soon find them heading for the honeysuckle cafeterias.

In general in piedmont and eastern Virginia, deer, turkeys, quail and rabbits utilize honeysuckle heavily, especially during the winter months and almost exclusively whenever snow covers the ground.

It is most interesting to note the deer browse on honeysuckle on some of our densely populated deer areas. The deer herd on such places as Camp A. P. Hill, Naval Weapons Station, Fort Eustis, Cheatham Annex and Camp Peary survive primarily because of the presence of large quantities of honeysuckle. Visit these areas in February and March and it will be found that all honeysuckle as high as the animals can reach has been eaten. Fortunately—and here's another advantage of honeysuckle over other plants—most of it will come back. By the following fall another season's growth will have come forth to feed the deer herd once again.

You rabbit hunters, where do you jump the most bunnies? We thought so—in old honeysuckle bottoms or in brush overgrown with this persistent plant. Last season close to 3,000 rabbits were taken on Camp Pickett; the hunters reported jumping most of them out of . . . you know what!

Practically all of our quail east of the Blue Ridge have thick stands of honeysuckle somewhere in their native range. Bird hunters are well aware of the fact that the quail inevitably flush into these dense jungles for escape cover. Honeysuckle areas are utilized for roosting sites as well as for nesting cover, and the leaves and berries furnish rations for most of our upland game birds.

Volumes could possibly be written on observations made on the relationships between wildlife and Japanese honey-suckle, but it is time to bring our discussions to a conclusion. We have attempted to point out that some Virginians thoroughly dislike honeysuckle and classify it in the same category as they do ticks, chiggers or taxes. Others sincerely believe it to be an excellent conservation plant, helping to save our soil and wildlife. The defense for honeysuckle rests. YOU can be the judge!

SEPTEMBER, 1959



Dedicated on July 4 of this year, Cumberland Gap National Historical Park includes visitor developments such as the information center and visitor shelter shown above.

Cumberland Gap National Park

By ROBERT L. KINCAID

Virginia Chamber of Commerce Photos by Flournoy

Place this year at Cumberland Gap where Kentucky, Tennessee, and Virginia come together. The eyes of the nation for two days were turned toward this historic gateway of the pioneers when federal and state officials took part in the dedication of the Cumberland Gap National Historical Park, the nation's newest and largest historical park. The National Park Service and dedication committees of Kentucky, Tennessee, and Virginia staged a two-day program of entertainment for more than 35,000 visitors on the week-end of July 4. The culmination of the events on the afternoon of the Fourth was the official dedication of the park at the Visitor Center, when Secretary of the Interior Fred A. Seaton was the guest speaker.

The dedicatory events began on July 3, when a gigantic parade of historical floats was led and reviewed by Vice President Riehard M. Nixon through the main avenue of Middlesboro, Kentueky. This was the largest parade ever witnessed in the tri-state area.

United States Senators Harry F. Byrd and A. Willis Robertson of Virginia, John Sherman Cooper and Thruston B. Morton of Kentucky, and Estes Kefauver of Tennessee were participants in the festivities. Congressmen from the three districts cornering at Cumberland Gap were also on hand—Pat Jennings of Virginia, Eugene Siler of Kentucky, and Carroll Reeee of Tennessee. Congressman and former governor of Virginia William M. Tuck and former governor of Tennessee Prentice Cooper were also among the distinguished guests. The National Park Service

delegation was headed by director Conrad L. Wirth.

The park area at present encompasses the historic gap where the Wilderness Road loops over the mountain wall for its entry into Kentucky, and about fifteen miles of the Cumberland Mountain barrier between Kentucky and Virginia and Tennessee. It embraces about 10,000 aeres in Kentucky, 7,000 acres in Virginia, and 3,000 acres in Tennessee. The visitor center and headquarters building of the National Park Service, where the dedication ceremony was held, is located on a knoll within the eity limits of Middlesboro, Kentucky, where the old Wilderness Road leveled out into the picturesque Yellow Creek Valley after crossing the mountain. Present-day federal highways 25-E and 58, and Tennessee state highways 33 and 63, which lead to the park, converge into one passageway in the "saddle of the Gap," the 1,000-foot declivity which cuts through the mountain wall.

The homecoming feature of the dedication was significant. Many descendants of the pioneers who traveled through Cumberland Gap in the settlement of the West were lured to the spot where the birth throes of American expansion were experienced in the last quarter of the eighteenth century. From 1775 until 1796, when the first wagon passed through the gap, more than 200,000 men, women and children traveled on horseback and on foot over the narrow, winding, difficult trail that penetrated the wilderness of the unexplored and unopened regions west of the Appalachians. After the road was made a little better, and after Kentucky had achieved statehood and other states had begun to be carved out of the Northwest Territory, many more thousands of settlers from Virginia

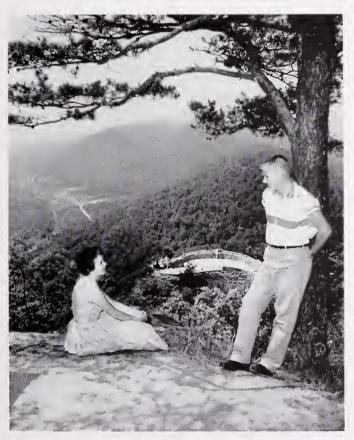
Adapted from June 1959 The Commonwealth magazine.

and the Carolinas and other eastern states toiled their way into the West to join the neighbors and friends who had preceded them during the flood tide of migration.

With the nation's attention focused on the dedication of the park on July 4, many descendants of these hardy pioneers visited the national shrine now preserved in memory of the men and women who built the Great West. The route of the Wilderness Road is followed rather closely for a considerable distance in Tennessee and Kentucky by federal highway 25-E, and the Cumberland Gap pass where the park is located is the most significant geological feature along the way.

Three former governors of Kentucky, Tennessee, and Virginia—Keen Johnson, Prentice Cooper, and Colgate Darden, Jr., respectively—were especially invited for the dedicatory service, but only Cooper could be on hand. If the three could all have been present, they would have had happy reminiscences of their first visit on August 23, 1943. On that hot afternoon they tramped over the proposed site for the park and had their pictures taken at the corner of three states, each standing in his own state. Then they shared a pleasant dinner at a rustic mountain hotel within the proposed park area (it has now been removed) and discussed procedures for the establishment of the national shrine.

The governors listened patiently at the 1943 dinner to the appeals and importunities of local citizens who had been working for the establishment of the park for more than twenty years. They were in sympathy with the idea, and were glad to sign a compact pledging themselves to proceed simultaneously in securing the appropriations for



A fourteen-mile road from the visitor center leads to this overlook terrace on one of the craggy crests of the Pinnacle, highest peak in the park.

the purchase of the minimum acreage required by the National Park Service before the area could be accepted by the federal agency. They signed three copies, one original and two duplicates. With considerable levity, the governors argued over which state should have the original copy. Someone produced a dice to settle the question. Quite fittingly, the "mother state" of Virginia won the throw.

The project which the three governors adopted for their cooperative effort could not be achieved during their administrations. But they made the first appropriations and committed their states to carry out the plans. Succeeding governors and administrations readily cooperated.

Two dates are especially significant in the story of the establishment of this national memorial to the heroic pioneers who built America—August 23, 1943, when the three governors signed the compact, and September 14, 1955, when Douglas McKay, then Secretary of the Interior, signed the formal acceptance of the deeds for the land from Kentucky, Tennessee, and Virginia. The latter date is considered the birthday of the Cumberland Gap National Historical Park.

For the local promoters who had been working on the project since it was first inspired in 1922, these two triumphant occasions provided great rejoicing. Steps had been taken through the years in promoting the idea, but it was 1937 before the National Park Service made a favorable report on the national park idea. The local leaders immediately formed the Cumberland Gap National Historical Park Association, a voluntary agency to work for the national legislation necessary for the establishment of the park, to raise the funds needed for countless trips, for conferences in Washington, Richmond, Frankfort, and Nashville, and for coordinating all the activities of the official bodies in the three states with the National Park Service in Washington.

Heading this voluntary group in the association were three men who had been interested in the park idea from its beginning. They were the author of this article, Robert L. Kincaid of Harrogate, Tennessee, who was chosen president; Howard J. Douglass of Middlesboro, Kentucky, secretary and treasurer; and Tom B. Fugate of Ewing, Virginia, vice president from Virginia. They were assisted through the years by many other business and professional men who gave valuable service.

It was the privilege of Messrs. Kincaid, Douglass, and Fugate to be present at the signing of the compact by the three governors in 1943, and, twelve years later, at the ceremonial function in the office of the Secretary of the Interior at which the deeds for the park lands were finally accepted. Secretary McKay used three pens in signing, one for the Tennessee papers, which he presented to Dr. Kincaid; one for Kentucky, which was presented to Mr. Douglass; and one for Virginia, presented to Mr. Fugate. These pens will be preserved in the museum at the park headquarters.

Since September 1955 much work has been done in the development of the park. M. Dean Guy heads the park staff as superintendent, and Dr. Roy Stubbs is park historian. National Park Service officials have adopted a



Tourists fram all aver America visit Cumberland Gap, where the borders of Kentucky, Tennessee and Virginia came tagether.

development program in Mission 66 that will require about \$6 million to complete. Over \$1 million already has been expended. About \$4 million will be needed for roads and trails in the park, \$600,000 for buildings and utilities, and \$250,000 for miscellaneous items. Further projects beyond the Mission 66 period have not been considered, but it is anticipated that future development plans will be given study when the present program ends.

The formal dedication of the park was deferred until July 4 of this year in order that certain major improvements could be completed. A visitor center and headquarters building was opened for the first time at the dedication. A scenic road from the visitor center to the crest of Pinnacle Mountain was opened to traffic for the first time, although a portion of the road has been in use since the park was established.

On the Pinnaele a large parking area and orientation center have been built, and a beautiful overlook has been constructed on one of the eraggy erests of the mountain. At this point, the vista includes Kentucky, Tennessee, and Virginia, and Lookout Mountain at faraway Chattanooga, Tennessee, ean possibly be seen through glasses on a clear day. The Great Smokies, where North Carolina joins Tennessee, are clearly visible.

In the visitor center and museum, which is located at the north entrance to the park in the city limits of Middlesboro, displays, exhibits, and audiovisual presentations provide interpretations of the historical meaning of the park. Four main periods in which Cumberland Gap has been important are emphasized. These are: the Indian and prehistoric period; pioneer and migration period; Civil War period; and an industrial-boom period of 1890 in which Middlesboro was founded.

A segment of the Wilderness Road across the mountain has been preserved and will be made available for hiking

parties. An easy trail leads to the Tri-State peak, the western portal of the famous pass where the three states eorner. The ruins of an old iron foundry in the town of Cumberland Gap, on the Virginia-Tcnnessee side, have been made accessible to visitors. Cudjo's Cave, which was discovered by Dr. Thomas Walker in 1750, is located on the highway circling the face of Pinnacle Mountain and is open to visitors by Lincoln Memorial University, which controls the cave for the water supply there. Civil War trenches and remains of fortifications which abound on the twin peaks will be stabilized and suitably connected for inspection by the public. Many miles of hiking and riding trails through the historical and scenic areas already have been established, and others are to be opened, with self-guiding and interpretive devices.

The scenic and wilderness areas are being made available for easy exploration. These include the Devil's Garden on the north side of Cumberland Mountain, where nature has created "a jungle wonderland"; the White Rocks on the eastern segment of the park area in Virginia; and the remarkable Sand Cave in the same region. Hiking trails connecting these points with the Pinnacle and Cumberland Gap have been constructed.

The Cumberland Gap National Historical Park is distinctive and unique in the national park system. It is the nation's largest historical park. It relates to a great span of this nation's history. It includes entrancing scenic and wilderness areas that form a proper setting for the panoramic story which Cumberland Gap has witnessed for three centuries. It portrays the might and mastery of bold adventurers who tamed the wilderness and pushed the American frontier beyond the Mississippi. Located in the heartland of the Southern mountains, it is easily reached from the heavily populated centers.

This park more than any other symbolizes the pioneer spirit and elements of greatness which characterized the young republic which came into being after the Revolutionary War. Its first leap toward greatness was across the last mountain barrier of the Appalachians where Cumberland Gap, the gate of destiny, was open.

* * *

The author of this article, Dr. Robert Lee Kincaid, of Middlesboro, Kentucky, has been president of the Cumberland Gap National Park Association since 1937 and has been closely identified with the sustained effort that has brought about the program now in progress at the park. He is president emeritus of Lincoln Memorial University of Harrogate, Tennessee.

Dr. Kincaid is a former viee chairman of the Kentucky National Park Commission, a member of the Tennessee Historical Association, and a past president of the Huguenot Society of Founders of Manakin in the Colony of Virginia. He is the author of *The Wilderness Road*, published in 1947, and of a number of other historical monographs and brochures. He is president of the Citizens News Company, publisher of the Middlesboro *Daily News*, which he edited prior to 1937.

12 VIRGINIA WILDLIFE

Mammals, Birds, Reptiles and Amphibians

Common names used in this "life list" are those found in *The Mammal Guide* by Ralph S. Palmer (Doubleday and Co., Inc., Garden City, N. Y., 1954), A Field Guide To The Birds by Roger T. Peterson (Houghton Mifflin Co., Boston, 1947) and A Field Guide To Reptiles and Amphibians by Roger Conant (Houghton Mifflin Co., Boston, 1958) from which the scientific names as well as the identifying characteristics, range and habits of each species can be obtained. Game and furbearing species (names in **bold** type) may be taken only by properly licensed persons during open seasons and under other regulations enforced by the Virginia Commission of Game and Inland Fisheries and, in the case of migratory game birds, the U. S. Fish and Wildlife Service. Whales followed by ¹ may be taken only by licensed commercial whalers; those followed by ² are completely protected. Birds followed by *and on which no open hunting season is declared may be taken only by those persons with valid state and federal scientific collecting permits; those followed by [†] may be taken only by landowners to protect their poultry or game birds.

Snakes followed by [†] are projectory. Snakes followed by ‡ are poisonous.

Mamm	nals	
Common Name W	here and When Se	en
Opossum		
Hairy-tailed Mole.		
Eastern Mole.		
Star-nosed Mole.		
Masked Shrew		
Smoky Shrew		
Southeastern Shrew		
Long-tailed Shrew		
Pigmy Shrew		
Little Short-tailed Shrew		*****
Big Short-tailed Shrew		600.T
Dismal Swamp Short-tailed Shrew		
Little Brown Myotis		12/2/
Kecn's Myotis		NA X
Indiana Myotis		المي ودرا
Least Myotis		2.45
Silver-haired Bat		See SH
Eastern Pipistrellus		D- C O
Big Brown Bat		Dr. C. O. saciate cur
Red Bat		U. S. Nat Smithsonian
Hoary Bat. Eastern Yellow Bat		the n
Evening Bat		
Western Lump-nosed Bat		
Eastern Lump-nosed Bat		
Black Bear		
Raccoon		
Least Weasel		
Long-tailed Weasel		
Mink .		
River Otter		
Spotted Skunk.		
Striped Skunk		
Red Fox		
Gray Fox		
Bobcat		
Harbor Seal		
Harp Seal		
Woodchuck		
Eastern Chipmunk		
Eastern Gray Squirrel		
Eastern Fox Squirrel		
Red Squirrel		
Southern Flying Squirrel		
Southern Flying Squirrel Northern Flying Squirrel		
Southern Flying Squirrel		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse Woodland Deermouse		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse Woodland Deermouse Cotton Deermouse		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse Woodland Deermouse Cotton Deermouse Golden Deermouse		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse Woodland Deermouse Cotton Deermouse Golden Deermouse Rice Rat		
Southern Flying Squirrel Northern Flying Squirrel Beaver Eastern Harvest Mouse Long-tailed Deermouse Woodland Deermouse Cotton Deermouse Golden Deermouse		

Meadow Vole		
Pine Mouse		
Muskrat		
Brown Rat		
Black Rat		
House Mouse		
Northern Jumping Mouse		
Woodland Jumping Mouse.		
Nutria		
Marsh Rabbit		
Eastern Cottontail		



Handley, Jr., as-atar of mammals, tianal Museum, Institution, provided nammal list.

North Atlantic Right Whale²

Nutria		
Marsh Ra	bbit	
Eastern C	Cottontail	
REASON SAN	New England Cottontail Varying Hare Elk	
	Sika Deer (Assateague Island) White-tailed Deer	
SOR BETT	Manatee Cuvier's Beaked Whale	
N. B. L.	Pigmy Sperm Whale	
ey, Jr., as- f mammals.	Rough-toothed Dolphin	
Museum, on, provided I list.	Atlantic Bottle-nosed Dolphin Common Blackfish	
	Short-finned Blackfish Finback Whale ¹	
Rorqual ¹		
Hump-bac	ked Whale ¹	

Birds

Northern Red-backed Mouse

White Ibis		Woodcock*		8 9
Whistling Swan*		Wilson's Snipe*		
Canada Goose*		Long-billed Curle	∶w*	
Brant*		Hudsonian Curley	v*	
White-fronted Goose*		Upland Plover*		
Snow Goose*.		Spotted Sandpipe	r*	
Blue Goose*.		Solitary Sandpipe	r*.	
Mallard*		Willet*		
Black Duck*		Greater Yellow-le	gs*.	
Gadwell*		Lesser Yellow-legs	S* .	
European Widgeon*		Knot*		
Baldpate*		Purple Sandpiper	.*.	
Pintail*.		Pectoral Sandpipe	er*	
European Teal*		White-rumped Sa	ndpiper*.	
Green-winged Teal*		Baird's Sandpipe	r*	
Blue-winged Teal*		Least Sandpiper*.		
Shoveller*		Red-backed Sand		
Wood Duck*		Dowitcher*		
Redhead*		Stilt Sandpiper*		
Ring-necked Duck*		Semipalmated Sar	ndpiper*	
Canvas-back*		Western Sandpipe		
Greater Scaup Duck*			Buff-breasted Sandpiper*	
Lesser Scaup Duck*			Marbled Godwit*	
American Golden-eye*.			Hudsonian Godwit*	
Buffle-head*			Ruff*.	
Old-squaw*.			Sanderling*	
Harlequin Duck*			Avocet*	
King Eider*	1		Red Phalarope*	
White-winged Scoter*	77		Wilson's Phalarope*	
Surf Scoter*	14.		Northern Phalarope*	
American Scoter*	1212	-3 M	Pomarine Jaeger*	
Ruddy Duck*	Dr. J. J. Murray,		Parasitic Jaeger*	
Hooded Merganser*	Roven, bulletin of 1	The Virginio	Northern Skua	
American Merganser*	Society of Ornith		Glaucous Gull*	
Red-breasted Merganser*	,		Iceland Gull*	
Turkey Vulture			d Gull*	
Black Vulture		Lesser Black-backe	d Gull*	
Swallow-tailed Kite†.				
Goshawk†		Ring-billed Gull*		
Sharp-shinned Hawk†		Laughing Gull*		
Cooper's Hawk		Bonaparte's Gull*		
Red-tailed Hawk†		Kittiwake*		
Red-shouldered Hawk†		Gull-billed Tern*		
Broad-winged Hawk†				
American Rough-legged Hawk		Common Tern*		
Golden Eagle†		Roseate Tern*		
Bald Eagle*		Least Tern*		
Marsh Hawk†		Royal Tern*		
Osprey†		Cabot's Tern*		
Duck Hawk†		Caspian Tern*		
Pigeon Hawk†		Black Tern*		
Sparrow Hawk†		Black Skimmer		
Ruffed Grouse		Razor-billed Auk*.		
Bob-white		Dovckie*		
Ring-necked Pheasant		Mourning Dove*		
Wild Turkey		Ground Dove*		
King Rail*		Yellow-billed Cuck	00*	
Clapper Rail*		Black-billed Cucko		
Virginia Rail*		Barn Owl†		
Sora*		Screech Owl†		
Yellow Rail*		Horned Owl†		
Black Rail*		Snowy Owl†		
Purple Gallinule*		Barred Owl†		
Florida Gallinule*		Long-eared Owl†		
Coot*		Short-eared Owl†		
Oyster-catcher*		Saw-whet Owl†		
Piping Plover*		Chuck-will's-widow	, *	
Semipalmated Plover*		Whip-poor-will*		
Wilson's Plover*		Nighthawk*		
Killdeer*		Chimney Swift*		
Golden Plover*		Ruby-throated Hu	inmingbird*	
Black-bellied Plover*		Rufous Hummingb		
Ruddy Turnstone*		Belted Kingfisher		
		· ·		

DI: 1 *	D1
Flicker*	Blue-winged Warbler*
Pileated Woodpecker*	Bachman's Warbler*
Red-bellied Woodpecker*	Tennessee Warbler*
Red-headed Woodpecker*	Orange-crowned Warbler*
Yellow-bellied Sapsucker*	Nashville Warbler*
Hairy Woodpecker*	Parula Warbler*
Downy Woodpecker*	Yellow Warbler*
Red-cockaded Woodpecker*	Magnolia Warbler*
Eastern Kingbird*	Cape May Warbler*
Western Kingbird*	Black-throated Blue Warbler*
Crested Flycatcher*	Myrtle Warbler*.
Phoebe*	Black-throated Green Warbler*
Say's Phoebe*	Cerulean Warbler*
Yellow-bellied Flycatcher	Blackburnian Warbler*
Acadian Flycatcher*	Yellow-throated Warbler*
Alder Flycatcher*	Chestnut-sided Warbler*
Least Flycatcher*	Bay-breasted Warbler*
Wood Pewee*	Black-poll Warbler*
Olive-sided Flycatcher*	Pine Warbler*
Horned Lark*	Prairie Warbler*
Tree Swallow*	Palm Warbler*
	Oven-bird*
Rough-winged Swallow*	Northern Water-thrush*
Barn Swallow*	Louisiana Water-thrush*
Cliff Swallow*	
Purple Martin*	Kentucky Warbler*
1	Connecticut Warbler*
Blue Jay	Mourning Warbler*
American Magpie	Yellow-throat*
Raven	Yellow-breasted Chat*
Crow.	Hooded Warbler*
Fish Crow	Wilson's Warbler*
Black-capped Chickadee*	Canada Warbler*
Carolina Chickadee*	American Redstart*
Brown-capped Chickadee*	House Sparrow
Tufted Titmouse*.	Bobolink*
White-breasted Nuthatch*	Meadowlark*
Red-breasted Nuthatch*	Yellow-headed Blackbird*
Brown-headed Nuthatch*	Red-wing*
Brown Creeper*	Orchard Oriole*
House Wren*	Baltimore Oriole*
Winter Wren*	Rusty Blackbird*
Bewick's Wren*	Brewer's Blackbird*.
Carolina Wren*.	Boat-tailed Grackle*
Long-billed Marsh Wren*	Purple Grackle*
Short-billed Marsh Wren*	Cowbird*
Mockingbird*	Scarlet Tanager*
Catbird*	Summer Tanager*
Brown Thrasher*	Cardinal*
Robin*	Rose-breasted Grosbeak*
Wood Thrush*	Blue Grosbeak*.
Hermit Thrush*	Indigo Bunting*
Olive-backed Thrush*	Painted Bunting*
Gray-Cheeked Thrush*	Dickcissel*
Veery*	Evening Grosbeak*
Eastern Bluebird*	Purple Finch*
Blue-gray Gnatcatcher*.	Pine Grosbeak*
Golden-crowned Kinglet*	Redpoll*
Ruby-crowned Kinglet*	Pine Siskin*
American Pipit*	Goldfinch*
Cedar Waxwing*	Red Crossbill*
Loggerhead Shrike*	White-winged Crossbill*
Starling	Green-tailed Towhee*.
White-eyed Vireo*	Towhee*
Yellow-throated Vireo*	Ipswich Sparrow*
Blue-headed Vireo*.	Savannah Sparrow*
Red-eyed Vireo*	Grasshopper Sparrow*
Philadelphia Vireo*	Leconte's Sparrow*
Warbling Vireo*	Henslow's Sparrow*
Black and White Warbler*	Sharp-tailed Sparrow*
Prothonotary Warbler*	Seaside Sparrow*
Swainson's Warbler*	Vesper Sparrow*
Worm-eating Warbler*	Lark Sparrow*
Golden-winged Warbler*	Pine-woods Sparrow*

SEPTEMBER, 1959 15

Slate-colored Junco*_
Tree Sparrow*_____
Chipping Sparrow*
Field Sparrow*___
White-crowned Sparrow*
White-throated Sparrow*__
Fox Sparrow*___
Lincoln's Sparrow*__
Swamp Sparrow*__
Song Sparrow*___
Lapland Longspur*___
Snow Bunting*

Reptiles

Snapping Turtle Stinkpot Stripe-necked Musk Turtle Eastern Mud Turtle. Spotted Turtle... Bog Turtle Wood Turtle Eastern Box Turtle.. Northern Diamondback Terrapin. Map Turtle. Eastern Painted Turtle Midland Painted Turtle Yellow-bellied Turtle River Cooter. Florida Cooter Red-bellied Turtle Atlantic Green Turtle Atlantic Hawksbill. Atlantic Loggerhead Atlantic Ridley.. Atlantic Leatherback Eastern Spiny Softshell Fence Lizard Six-lined Racerunner Ground Skink Five-lined Skink Broad-headed Skink Southeastern Five-lined Skink Coal Skink. Slender Glass Lizard Brown Water Snake Red-bellied Water Snake Northern Water Snake Oueen Snake Glossy Water Snake Northern Brown Snake Red-bellied Snake Eastern Garter Snake Eastern Ribbon Snake Rough Earth Snake Smooth Earth Snake Eastern Hognose Snake Northern Ringneck Snake Southern Ringneck Snake Eastern Worm Snake Rainbow Snake Mud Snake Northern Black Racer Rough Green Snake Smooth Green Snake Corn Snake. Black Rat Snake Northern Pine Snake Eastern Kingsnake Black Kingsnake

Mole Snake
Scarlet Snake
Southeastern Crowned Snake‡
Northern Copperhead‡
Eastern Cottonmouth‡
Carolina Pigmy Rattlesnake‡
Timber Rattlesnake‡
Canebrake Rattlesnake‡

Amphibians

Mudpuppy.....
Dwarf Waterdog.....
Greater Siren........
Two-toed Amphiuma...
Jefferson Salamander...
Marbled Salamander ...
Spotted Salamander ...
Red-spotted Newt ...
Northern Dusky Salamander
Southern Dusky Salamander...
Flat-headed Salamander..........
Allegheny Mountain Salamander.

Hellbender..



Officers of the Virginio Herpetological Society (seal above) provided information on which reptile and amphibian lists are based.

Roanoke Salamander.

Yonahlossee Salamander.... Metcalf's Salamander. Four-toed Salamander. Many-lined Salamander. Spring Salamander. Blue Ridge Spring Salamander Eastern Mud Salamander..... Northern Red Salamander. Green Salamander. Northern Two-lined Salamander Blue Ridge Two-lined Salamander Long-tailed Salamander Three-lined Salamander Cave Salamander Eastern Spadefoot. American Toad Fowler's Toad Southern Cricket Frog. Northern Cricket Frog Northern Spring Peeper. Green Treefrog Pine Woods Treefrog Squirrel Treefrog Eastern Gray Treefrog. Little Grass Frog. New Jersey Chorus Frog Upland Chorus Frog. Brimley's Chorus Frog Mountain Chorus Frog. Eastern Narrow-mouthed Toad Bullfrog.. Carpenter Frog Green Frog.. Northern Leopard Frog. Southern Leopard Frog

Pickerel Frog..

Eastern Wood Frog.

Scarlet Kingsnake

Eastern Milk Snake

Coastal Plain Milk Snake

ATTENTION DOVE HUNTERS!

By HOWARD L. SHELDON District Game Biologist

The mourning dove hunting season will be opening in a very few days. The experienced hunter has his favorite shooting field spotted and the landowner has been contacted for permission to shoot. The "first time" dove hunter has his enthusiasm aroused by tall tales of experienced hunters. However, he feels very confident in himself on his first hunt and fills his hunting vest with 25 shells with which he will bag his limit for the day. Midway through the afternoon's shoot he begins to move around. This time not for a better shooting position, but for someone with more shells. If lucky, he will have collected half of his bag limit and if he can find another box of shells, he may be able to "fill out." The hunter who does not try dove shooting because he says it lacks "sport" had best saye his remarks until after he samples it.

Each year more hunters go into the field for doves. In 1955, the nationwide dove kill was estimated to be over 19 million. This figure has increased substantially in the past three years. Last year, hunters in Virginia felt doves were hard to find and questioned the more liberal bag limit. Let us take this opportunity to investigate the management work that is being done.

The mourning dove, locally called the rain dove or the turtle dove, is migratory and therefore comes under the jurisdiction of the U. S. Fish and Wildlife Service. In 1948, a need for dove management was recognized and a Cooperative Dove Investigation Program was organized in the southeastern states. This program was initiated by the U. S. Fish and Wildlife Service through cooperation with the various state wildlife agencies. A dove banding program was undertaken to determine migration routes and a method of censusing was devised to watch trends in dove populations.

The banding program has been successful; approximately 190,000 doves have been banded since 1948. About half of these have been banded in the past three years as a result of a special nationwide dove nestling banding program. Recoveries of these banded birds determine migration routes which are used in setting seasons. About 3.7 percent of all banded doves have been recovered. The major portion of these have been reported by hunters. It has been learned from these recoveries that doves migrate in three general flyways: eastern, central, and western. Prior to collecting this information, doves were managed according to the four waterfowl flyways.

Also, it has been determined what percent of banded doves are shot in the state where they were banded, and what percent are shot outside the state. An intensive banding program has not been undertaken in Virginia; however, scattered individuals have banded a few and some have been recovered. Fourteen doves banded in Virginia have been recovered; six in Virginia, two in Florida, two in Georgia, one in South Carolina, and three in North Carolina. Sixteen doves banded in other states have been recovered in Virginia. They are from the

following states; Massachusetts—six, North Carolina—three, Pennsylvania—three, Indiana—one, Kentucky—one, New Jersey—one, and Ohio—one. As a comparison, from Massachusetts, 201 banded doves have been recovered of which 23 were within the state and 177 outside the state. Those outside the state were recovered in 17 states and Nova Scotia. About 40 percent were recovered in Florida and Georgia. This indicates that the fall dove population depends largely on the breeding population in states to the north.

The second objective of the Cooperative Dove Investigation Project was to establish a method of censusing doves to determine an increase or decrease in the dove population. A spring breeding census route was devised. This route was to be 20 miles long with three-minute listening stations each mile, and was to start at one-half hour before official sunrise. The stops were marked, thus making the route permanent. The purpose was to census this route each year and to note an increase or a decrease in the number of doves heard and the number seen from year to year. This method of census was standardized and to date, 677 routes in 48 states have been established. We have 10 such routes in Virginia. The information collected is sent to the U.S. Fish and Wildlife Service to be analyzed and used as basis for establishing the hunting season.

Information from the routes this spring indicates a slight decrease in the breeding population east of the Mississippi River and an increase west of the Mississippi River. On a nationwide basis, there is a slight increase. Because of the many variables that enter into this census method, it is doubtful if the slight decrease east of the Mississippi will be noticed.

What about the hunting season this year in Virginia? Will we have more or less doves to shoot? According to the spring census, routes in Virginia showed a slight increase this year. Also, from our banding recoveries, we're interested in Massachusetts, Pennsylvania, and North Carolina. Each of these states showed a sizeable increase in the spring breeding population. Young doves usually travel north in early fall before returning south for the winter; as a result, we may get a few extra doves from North Carolina early in the season. This, with our increase in the local breeding doves should afford a good early dove population. The increase in the breeding population in Pennsylvania and Massachusetts should provide us with a few more doves late in the season.

In conclusion, the outlook is for more doves this year than last year. However, before buying an extra case of shells, let us not forget Mother Nature may have something to say. Weather conditions and availability of food are what controls the number of doves that will be available to the hunter. Severe weather conditions and scarcity of food will discourage doves from lingering in the Old Dominion.

The Virginia Commission of Game and Inland Fisheries

By BEVERLEY W. STRAS, JR., Chairman

HE scientific management of Virginia's resident game birds, mammals and freshwater fish to maintain good public hunting and fishing for the state's 600,000 sportsmen who annually spend over 70 million dollars in connection with their sport is the job of the Commission of Game and Inland Fisheries.

What It Is

Interested and informed business or professional men from each of the state's 10 congressional districts are appointed by the governor to serve without pay for staggered six-year terms on the commission itself, which meets regularly to set the policies and regulations under which its professional staff operates.

The working group which puts the commission's plans

into action, headed by an executive director appointed by the commission, now consists of:

- an administrative office which includes the director, his assistant and their secretarial and building maintenance staff;
- a law enforcement division, with 138 game wardens—at least one in every county game warden supervisors in each of six districts, and a chief and his secretary;
- a game division made up of game managers on some 35 game management units, a game farm superintendent and his hourly help, 18 biologists on nine districts and on several research projects, and a chief and his secretary;
- a fish division including some 28 salaried hatchery personnel and eight biologists under a chief and his assistant, with their secretarial staff;
- an education division consisting of a chief, his assistant and some 10 trained persons in publicity and publications, audio-visual, circulation and distribution and field services sections, and
- a fiscal division of four persons including the division chief.

The offices of the director, the division chiefs and all of the sections of the education division are at 7 North Second Street in downtown Richmond. The hearing room of this building is used for most of the commission's meetings,

at which the public is welcomed.

This state organization is self-supporting. Its operating expenses are appropriated only from the game protection fund, which consists of hunting and fishing license sales receipts, federal aid allotments derived from excise taxes on sporting arms and ammunition (Pittman-Robertson funds) and on fishing equipment (Dingell-Johnson funds) and 15 percent of the dog license revenue from those counties not yet enforcing their own dog laws. In recent years, 80 percent of the commission's income has been from sporting license sales; 12 percent has come from federal aid and five percent from dog license revenue.

Its History and Activities

The Department of Game and Inland Fisheries came

into being in 1916 when the General Assembly, at the request of the Virginia Division of the League of American Sportsmen, the Virginia Audubon Society and the Farmers Institute, set it up under a commissioner who was also chief of the Commission of Fisheries. The first secretary of the department was the late M. D. "Mac" Hart, to whom goes the credit for the department's early organization and development. Between 1916 and 1926, the present game warden system was inaugurated, a state game farm and bass hatchery was established, a game survey was made, elk and ring-necked pheasant were brought into the state and liberated, quail, wild turkey and deer from the game farm were stocked, and a director of education, Louis W. Tyus, was hired to edit the bimonthly Game and Fish Con-SERVATIONIST magazine and prepare educational pamphlets,



Commission Photo by Kesteloo

Hunting and fishing regulations ore set by the commission (bockground) ofter it considers the findings of its stoff of biologists and the suggestions of individual sportsmen (foreground).

lectures and films.

Passage of the Baker Dog Law in 1918 meant that game wardens had to enforce the dog laws in the counties to which they were assigned.

In 1926, the Department of Game and Inland Fisheries was divorced from the Commission of Fisheries and placed in the hands of its own five-man commission. Governor Byrd appointed Major A. Willis Robertson, Samuel P. Goodloe, Beverley W. Stras, Jr., William S. Snow and Allan

Epcs to the new Commission, which was formally organized in Richmond on July 30 and 31, 1926. The chairman of the commission and administrative head of the organization, Major Robertson, set up an office staff by appointing an executive secretary, a fiscal secretary and necessary stenographers and clerks for the "Blue Ridge Division" branch office in Roanoke as well as for the Richmond office in the old State Library Building on Capitol Hill.

During the period 1926-1930, the Windsor Shades game farm produced some 3,000 quail and several hundred turkey annually, several thousand Mexican bobwhite quail and 150 Hungarian partridge were experimentally stocked, three trout rearing stations were established in western Virginia, the commission was given the power to shorten hunting seasons and to issue freshwater fishing licenses, and G. W. Buller was employed to head the fish division and Charles O. Handley was named superintendent of game propagation.

Between 1930 and the reorganization of the commission in 1942, operations at the game farm continued, beaver were re-introduced into the state, Wyoming elk were liberated in Giles and Botetourt Counties, the modern Front Royal, Stevensville and Marion fish hatcheries were built, a policy of stocking only "keeper-sized" trout was adopted, the Cooperative Committee on Stream Pollution surveyed the pollution in the state's major rivers, and a program of purchasing and leasing public fishing ponds was begun. Major Robertson resigned as chairman of the commission in 1933 to run for Congress, and was succeeded as chairman by Carl H. Nolting.

Several important cooperative agreements with federal agencies were signed, turning over the wildlife on the 30,000-acre Big Levels Wildlife Management Area in Augusta County to the U. S. Forest Service for experimental wildlife management projects (1935), setting up the Virginia Cooperative Wildlife Research Unit at Virginia Polytechnic Institute in cooperation with the U. S. Biological Survey (now the Fish and Wildlife Service) (1935), and providing for joint administration with the U. S. Forest Service of the wildlife on the 1,500,000 acres of national forest land in Virginia (1937). The sale of one-dollar stamps to hunt, fish and trap on the national forests to provide revenue for the management of the game and fish on these lands was begun.

The deer restocking program went into high gear during this time with the help of the Pittman-Robertson Act of 1937 which levies an 11 percent tax on guns and ammunition and provides 75 percent of the money for approved state wildlife restoration projects. Some 1,800 deer were purchased from Georgia, Michigan, North Carolina, Pennsylvania and Wisconsin and stocked primarily on the national forests. Pittman-Robertson funds also made possible the hiring of trained game biologists to carry out research projects and apply the latest wildlife management techniques under the direction of Chester Phelps, Handley's successor as Superintendent of Game.

The publication of Virginia Wildlife magazine, begun at Virginia Polytechnic Institute with Cecil F. Delebarre as editor, was taken over by the game commission in 1940.

The administrative structure of the commission was

revamped by legislative act on July 1, 1942. The old commissioners went out of office and new commissioners were appointed from each of the nine congressional districts by Governor Darden. Judge William S. Snow was elected chairman of the commission, which, under a provision of the reorganization act, was empowered to choose its own executive director. George Washington National Forest wildlife technician Talbot E. Clarke was named to be the commission's first executive director. Snow continued as commission chairman until July, 1944, when the commission elected the writer to its chairmanship.

During World War II, income from the sale of sporting licenses dropped sharply. The publication of Virginia Wildlife was discontinued in the winter of 1942, and other eoinmission programs also were cut back during the war years.

In September, 1946, I. T. Quinn, former commissioner of the Alabama Conservation Department, was employed as executive director, replacing "Tibbs" Clarke who had resigned in August of that year. The publication of Virginia Wildlife resumed on July 1, 1946, with Clyde P. Patton, publication division chief, serving as editor, and a news release service was begun. Also in 1946, the state game farm was moved from Windsor Shades to its present location near Cumberland. The first wildlife essay contest co-sponsored by the Virginia Division of the Izaak Walton League and the commission was announced in 1947.

During 1948, a legislative act providing for issuance of separate hunting and fishing licenses was passed, with the provision that the revenue from each go toward the restoration of game and fish, respectively. J. J. Shomon, assistant chief of the publications division, was named to succeed division chief Patton, who resigned to accept a position with the North Carolina Wildlife Resources Commission, and Miss Evelyn M. Paris (now Mrs. Evelyn P. Rueger), commission secretary, was named assistant executive director.

Supervising game warden M. Wheeler Kesterson left his southwestern Virginia district to become the first chief of the law enforcement division in 1950, and was succeeded in this position in 1952 by former warden supervisor Webb Midyette.

With the passage of the Dingell-Johnson Act by Congress, federal aid from a 10 percent excise tax on fishing equipment became available on July 1, 1951 for approved fish research and management projects.

The fish division has used federal aid funds to determine:

- fish populations, the crop of game fish available to the angler, and harvest on all of the state's large reservoirs, state-owned fishing ponds. Lake Drummond and Back Bay (The beginning of the threadfin shad stocking program to provide food for game fish and the lengthening of the open season on bass were two results of this study);
- the effects of drainage and subsequent population manipulation of ponds;
- the relation of time of trout stocking to fishing success;
- the effect of year-around bass fishing; and
- the physical, chemical and biological features of the state's trout and smallmouth bass streams and the fishing success on these streams.

"D-J" funds have also been used to construct or purchase public fishing ponds.

Hog Island Waterfowl Refuge in the James River in Surry County was purchased in 1951 and developed by the game division which also was supplying shrub lespedeza plants and tons of lespedeza and special game bird mixture seed each year to private landowners through district biologists, game wardens and soil conservation districts.

Construction of clearings, water holes, hunter access roads and trails and other improvements on the national forests became part of the game division's continuing program, as did the improvement of wildlife habitat by means of food plantings on public hunting areas in eastern Virginia.

The Buller Hatchery was built near Marion in 1954 for the production of additional bass and bluegill. The fish division continued to stock a half-million one- and two-yearold brook and rainbow trout in 141 streams and three lakes each year in addition to producing and releasing thousands of warm water game fish.

Land acquisition to assure Virginians of a place to hunt and fish has recently become an important part of the commission's program. Commission purchase in 1957 and 1958 of the 18,500-acre Gathright Wildlife Management Area in Bath and Alleghany Counties, 5,000-acre Saxis Waterfowl Refuge in Accomack County, and boat landings on the James River in Powhatan County and on the Shenandoah River in Page and Clarke Counties kicked off a drive for public hunting and fishing lands that has resulted in the recent purchase of 9,000-acre Mockhorn Island off the coast of Eastern Shore in Northampton County and the 1,500-acre Wunder Tract in Rockingham County. Also effected have been the signing of cooperative agreements with private corporations such as Union Bag-Camp Paper Corporation, Lehigh Portland Cement Co., Fairy Stone Farms, Inc. and Lester Lumber Co. and with the U.S. Army to open large tracts of formerly closed land to the public.

Spearheading this drive to increase hunting and fishing opportunity have been former game division chief Chester Phelps, who was named executive director upon I. T. Quinn's retirement on June 30, 1958, and Richard H. Cross, Jr., promoted from game biologist supervisor to game division chief on July 1, 1958.

Wildlife protection in Virginia took a giant step forward in 1958 when the General Assembly amended the state law to permit county boards of supervisors to retain their dog license sales receipts and hire full-time dog wardens. Over 60 counties now enforce their own dog laws; as a result, over 60 state game wardens are no longer required to spend about half of their time chasing dogs and are free to work as full-time wildlife protectors. Two-way radios, boats and outboard motors, an airplane and other modern equipment have also increased the effectiveness of the entire law enforcement field force.

Why It Carries On These Activities

To explain why the game commission carries out the activities that it does, we must first set down the "ground rules" by which the wildlife management "game" is played.

To begin with, we must realize that all natural resources—minerals, soil, water, forests and wildlife—are: (1) Godgiven and subject to unchanging natural laws; (2) vital to man's existence: (3) decreasing in the face of an increasing human population; and (4) related and more or less dependent on one another. The conservation of our natural resources—their intelligent use so as to achieve the greatest good to mankind—is a responsibility of every citizen, because everyone is affected by how our natural resources are used. Other basic concepts to remember are:

- Soil and water are essential to plant and animal life.
- Animals cannot live without plants.
- The natural environment of all living things is always changing, and man can speed this change for better or worse.

Wildlife management includes changing the natural environment to help produce a sustained annual crop of wild game for recreational purposes. This is called habitat improvement. It also includes protection of the game animal breeding stock from excessive harvesting by man and by its natural enemies (enforcement of season, bag limit and other regulations, and predator control). Introduction of new or extirpated game species in suitable habitat (stocking) is another phase of wildlife management.

Wildlife managers—and well-informed sportsmen—know that the right combination of these wildlife management practices is necessary to increase the supply of fish or game because:

- Any desired species has definite habitat requirements, such as farmland, forest, marsh, wilderness, cold water or warm water.
- Each unit of land or water can only hold a limited number of any species.
- This "carrying capacity" may be limited by shortages of food and/or cover, how much the species can stand crowding, and decimating factors such as accidents, disease, starvation and predation.
- Any increase of the numbers of a species on a particular land unit or in a body of water will have to come through elimination of one or more of these limiting factors.
- Each resident species' breeding potential and its productivity far surpasses that number of the species which can survive the entire year.
- It is from this surplus that the decimating factors take their toll, and hunting and fishing are but two decimating factors. The sportsman's take can be increased through the elimination of other decimating factors.
- Elimination of species in adequate habitat is impossible because both sportsmen and predators take that which is easier to get. As the population available is lowered, sporting interest decreases.
- Management for any given species, therefore, involves the changing of the habitat to permit the highest possible resident population, the elimination of as many decimating factors as possible, and the harvesting of the surplus as near its peak in numbers as possible.

As long as there are game law violators, law enforcement will be necessary. Season and bag limit regulations are, for the most part, based on scientific data assembled by game and fish research biologists. When population censuscs, previous seasons' kill figures, winter mortality, hatching success and hunting and fishing pressure are all taken into consideration, the biologists recommend to the commission the most lenient seasons and bag limits they consider advisable, and their suggestions are generally adopted. It can be seen that wanton taking of fish and game over and above that expected by the biologists may be eliminating needed breeding stock and can "upset the apple cart."

Currently, 40 percent of the game commission's two million dollar budget goes to finance the activities of its law enforcement division. This division's game wardens serve not only as law enforcement officers, but conduct educational programs and aid in game and fish management projects. Virginia's wardens travel almost 4,000,000 miles and see some 9,000 persons convicted of game, fish and dog law violations annually. Fines, which have totalled over \$100,000 per year, go into the state literary fund for the building of local schools.

Predator control, once thought to be a cure-all and encouraged by means of a bounty system, has been found to be advisable only where specific problems of a local nature exist. Rabies is controlled by local fox trapping programs supervised by a game division specialist, and predator control on those areas heavily hunted for quail and rabbit or in which rare game birds are being experimentally released may be advisable. Generally, however, predators do the sportsmen a favor by weeding out the sick, weak, old and less intelligent animals, leaving the most healthy, wild individuals to reproduce their kind.

Stocking, too, was once looked upon as the way to fish and game abundance. Hit-and-miss releasing of all kinds of birds, mammals and fish in unsuitable habitat has wasted thousands of dollars. It was found that it did no good to raise and release 50,000 quail a year in Virginia when several million wild hatched birds perished every year because they could not find adequate food, cover and water. The only native game birds now raised at the state game farm are a few quail for field trials and a few turkeys for liberation in areas where turkeys are now absent. The accent at the game farm is now on the production of foreign game birds for experimental release. While coturnix quail stocking has been tried and given up recently because these small birds failed to "stick" and establish populations, game biologists are hoping they will have better luck with the Iranian blackneck pheasants and Japanese green pheasants now being raised at Cumberland for release in specially selected areas. These birds have no native counterpart in Virginia and perhaps will thrive in a habitat now going unused.

Turkey populations have been re-established in several areas in Virginia through the successful live-trapping and transplanting of wild birds. This method has been found more satisfactory than releasing game farm birds which have lost some of their wild qualities.

Both warm water game fish and trout are raised and released in large numbers by the fish division at its five hatcheries to supplement the fish supply in public fishing lakes and mountain streams. Creel censuses have shown a high return to the creel of these fish, particularly in those mountain lakes managed especially for and stocked with

trout. The fish division's budget of some \$325,000 annually is 15 percent of the commission total.

Of the nine federal aid ("P-R") projects involving stocking set up by the game division since 1941, only one—involving the transplanting of wild turkeys—is still in operation. Quail, deer and beaver stocking projects have been discontinued or completed.

The game division is now spending most of its 600,000-dollar annual budget on providing wildlife food, cover and water, knowing that the game will be there if its habitat is provided.

Four Pittman-Robertson projects have been underway for years to provide:

- food and cover trees, clearings, salt licks and waterholes for forest game, and hunter access roads and trails, on the national forests;
- food and cover for farm game on over 5,000 private farms and hunt club grounds as well as on many miles of utility rights-of-way and on all public hunting areas east of the Blue Ridge Mountains;
- clearings and food plantings on the state forests; and
- waterfowl food, including experimental plantings of Japanese millet and wintergreen, on Hog Island refuge in the James River.

Waterfowl and upland game (deer, bear, turkey and grouse) are the subjects of the game division's two research projects. Bag checks, a Back Bay study to improve waterfowl habitat, and marshland acquisition and management all are a part of the former project, while game kill estimates, bear trapping and tagging, deer and bear embryo studies, and turkey and grouse censusing are included in the latter project.

It has been said that, in reviewing all of the achievements in the field of wildlife conservation, the greatest single achievement has been the enlightenment of the public. The game commission's education division, with an annual budget of some \$150,000, produces the magazine Virginia WILDLIFE, a weekly news release, informational bulletins and reprints and motion pictures to keep the sportsmen and the general public informed on commission activities and on the need for better land use practices. Over 36,000 copies of Virginia Wildlife magazine are mailed to subscribers each month, several thousand copies of the booklets Birdlife of Virginia and Freshwater Fishing and Fishlife in Virginia are sold and thousands more free publications are distributed each year and new films are constantly being added to the free film loan library (which now includes 61 titles. This work is supplemented by personal contact work with schools, clubs, camps and cooperative wildlife education projects such as teacher workshops. The annual wildlife essay contest, co-sponsored by the Izaak Walton League, is administered by this division with the help of the commission field force, and a colorful conservation exhibit at the Atlantic Rural Exposition in Richmond each fall is another education division project.

One of the most important responsibilities of the commission is to keep track of where its money comes from and how it is spent. This accounting of all monies in the entire commission, and the setting up of the biennial budget, are the functions of the commission's fiscal division, which operates on some \$40,000 per year.



The Nighthawk

By DR. J. J. MURRAY

Lexington, Virginia

N any May evening in Virginia the farm boy heading homeward from his chores will see flying high above him with quick, erratic wing beats a slender, graceful, long-winged bird. He will know that the first "bullbat" is back from the South. If it is a migrating bird, it will soon be followed by another, and another, until maybe the boy has counted several hundred before the flight has ended. Later in the month, if it is a bird that has come "on location" and is seeking a mate he may hear from it a loud "peent," or he may watch while the bird sets its wings in a rushing power dive, turning upward just before it nears the earth, and then he will hear another sound, this time made with wings and not with voice, a loud "voom."

In the old days, before hunters had developed a sane code of sportsmanship, there were men who would station themselves on hilltops as these migrating flights passed by and try their skill by shooting down as many as they could of these harmless and beautiful creatures. Today no decent man would indulge in such senseless slaughter.

The nighthawk's "peent" is one of the few bird sounds that can be heard at night. On moonlight nights it may be heard well into the morning hours, for this bird hunts by night even more than by day. It is related to the whippoor-will and other birds, but is the only member of its family that customarily flies high in the air. If there is any doubt about its identification, it can always be told by the large white spot that looks like a hole in each wing.

The nighthawk comes as near as any bird to making no nest at all. Its ancestral location is on a sandy spot on the open ground, where a slight depression is hollowed out by the bird's body, but in these days of civilization many nighthawks are using the flat roofs of city buildings. All over America I have heard them calling at twilight over the center of cities large and small. In a recent summer in Lexington we found five nests inside the town limits. One was in a little pocket on a limestone ledge in a lumber yard, where all day the noisy trucks were passing within a few feet. The others were on roofs, one on a church, one on a garage, and two on the tops of store buildings. One pair usually nests on the Robert E. Lee Hotel and another pair on some building at V. M. I.

In these situations the splotched eggs and later the mottled young so closely match the gravel and tar roofs that it takes a good eye to detect them. On these exposed nesting sites the need for the mother bird was not most of the time to keep the eggs warm enough to hatch but, by standing over them on hot June days, to keep them from cooking. They are, on the whole, safe places, with the one hazard that on its first effort to fly the young bird may fall into the street below and soon perish.

This is one bird that catches all of its food on the wing. Its mouth is huge. It flies high in the air, sometimes striking at insects, but more often, with wide mouth open, just taking whatever comes its way. When it crosses a swarm of gnats it can find a dinner in a few minutes.

VIRGINIA WILDLIFE



Game Biologist Resigns

Elmer V. Riehards, distriet game biologist for the Virginia game commission, resigned his position August 1 to become a forester with the U. S. Forest Service on the Wasatch National Forest in Utah. Located at Harrisonburg since 1949, Richards had accumulated 10 years of experience in game management on both private lands and the George Washington National Forest.

A graduate of the University of Michigan in 1949 with a masters degree in forestry and wildlife, Richards plans to settle with his wife Linda and their four children near Kamas, Utah.

Harrison Assigned To Information Officer Post

Second Lt. George H. Harrison, former wildlife education specialist with the commission's education division, has been assigned the position of assistant information officer, Post Headquarters, at Fort Dix, New Jersey.

Harrison, who attended Tarentum Pennsylvania High School, graduated from the Pennsylvania State University School of Journalism in 1958, and is a member of Phi Delta Theta fraternity, was a writer, photographer and lecturer for the commission from July 1958 to May 1959, and will return to his education division post upon completion of his active duty in November. He attended the infantry officers leaders course at Fort Benning, Georgia, before coming to Fort Dix.

Flarrison and his wife Hester now reside at Box 515, Browns Mills, New Jersey.

Bass Tag Rate of Return Slow

Only 18 tags out of 249 placed on bass in the South Fork of the Shenandoah River by Virginia game commission fish division personnel during the week ending June 20 have been returned to the commission's Riehmond office to date. Bob Martin, fish division assistant chief, urges fishermen to return the tags so that the commission can



"Cam" Huffer af Mt. Salan, Va.



"Galdie" Smith of Hinton, Va. (right) receiving retirement gift from Peter J. Hanlan, U. S. F. S.

A retirement dinner hanaring C. E. "Cam"
Huffer, game manager an the Narth River
management unit far 25 years, and Galden B.
Smith, game manager an the Dry River management unit far 22 years, was held at Camp Tadd
in the North River unit an June 20. Same 32
friends—game managers, wardens, farest service persannel and athers—presented each a
gift. Max Dawney af Elktan, Va. was named ta
succeed Smith an July 1; Jae Huffer succeeded
his dad an the Narth River unit. Both units are
an the Dry River Ranger District af the Gearge
Washingtan Natianal Farest.

learn the rate of harvest and determine why there are so many small bass—and so few big bass—in that stream. A one-dollar reward is given for every tag returned.

Concrete Ramp Improves Watkins Landing

Watkins Landing, a game commission-owned boat landing area on the James River in Powhatan County, has been regraded to a gentle 10 percent slope, and a 30-foot concrete ramp has been installed to permit easier fisherman access to the water. The road into the landing from Route No. 711 has also been improved. The commission is making every effort to obtain additional landing sites on the James between Columbia and Richmond to open 50 miles of this river to the public.

Davey Given Special Assignment

Stuart P. Davey, assistant chief of the education division, has been put on special assignment for up to six months to study the informational and educational activities of the game commission's field forces and recommend ways in which this public service can be improved.

Davey began his survey August 15 and will contact many civic, sportsmen and business leaders around the state, as well as personnel of the Virginia commission and game agencies in some other states before making any recommendations.

Reason for the special study is the commission's desire to more adequately cope with the increased demand from the state's growing population for outdoor recreation information.

Davey joined the commission in 1953 and travelled the state widely in his work as a game research biologist before joining the education division in 1958.

During Davey's assignment, M. Rupert Cutler, who joined the commission in 1958 as associate editor of Virginia Wildlife, will act as ehief of the publicity and publications section. Other duties will be absorbed by other members of the education division, headed by Dr. J. J. Shomon.

SEPTEMBER, 1959



Virginia Deer Disease Study Shows Absence Of Brucellosis

The Virginia game commission cooperated with other southeastern game agencies last fall in the collection of blood samples from white-tailed deer in an effort to determine whether these important big game animals were carriers of brucellosis (Bang's disease), a feared disease of cattle.

The 3,432 blood samples, 427 of which came from Virginia, proved negative except for two "suspects", one from Louisiana and one from Georgia.

This research is part of the work of the Southeastern Cooperative Deer Disease Study which is quartered at the University of Georgia School of Veterinary Medicine. The study was instigated by the Southeastern Association of Game and Fish Commissioners and is designed to keep abreast of any and all disease outbreaks that might influence the relationship of the southeastern area's growing livestock industry and the whitetail deer resource.

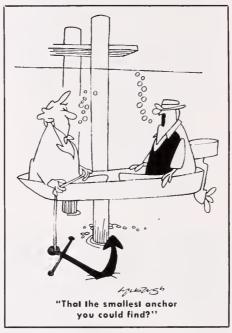
Hog Island Archery Season to Match State Season

The archery season for deer on the Hog Island Waterfowl Refuge in Surry County will be the same as the statewide season, October 15 through 31. During this open season, no permits will be needed. However, the number of hunters will be limited to 75 per day on a first-come first-served basis. Prior to this year, several special permit seasons have been held on the 2,100-acre refuge.

Cain Appointed to Michigan Conservation Commission

The appointment of Dr. Stanley A. Cain to a six-year term on the Michigan Conservation Commission should prove popular with Wolverine Staters. Chairman of the University of Michigan's Department of Conservation in the School of Natural Resources,

Cain is a noted ecologist with an international reputation for his ability to put complex matters into understandable terms. Cain succeeds Dr. Shirley W. Allen, who has served on the Commission and has an outstanding record of accomplishment.



Poisonous Snakes of Kansas

Poisonous Snakes of Kansas, by Robert F. Clarke, Instructor in Biology at State Teachers College, Emporia, Kansas, is a 16-page booklet describing all of the poisonous species of Kansas snakes, complete with colored pictures of both the poisonous snakes and six species of non-poisonous ones commonly thought to be poisonous. Copies of this booklet, published as Volume 5, Number 3 of The Kansas School Naturalist, are available for 25¢ each, postpaid. Send orders to The Kansas School Naturalist, Department of Biology, State Teachers College, Emporia, Kansas.

Interior Releases Film on Outdoor Fish Cookery

Nine American fish "cook-outs," filmed to reflect the heritage and tradition of the areas portrayed, are shown

in a new sound-color, 16-mm film just released by the Department of the Interior.

The 28-minute film is the 16th in a series of fishery educational motion pictures produced by the Bureau of Commercial Fisheries, United States Fish and Wildlife Service, all of which are available on a free loan basis.

Gloucester Point, Virginia, where oyster roasts have been popular since the historic days of Jamestown and Williamsburg, is the scene of a sequence in the film.

Carling Conservation Club Offers Free Film Loan Service

Rod and gun clubs and other organizations are offered free use of films on fishing, hunting, and conservation by the Carling Conservation Club. Available are the following films, and all that any club program director need do is to write to the Carling Conservation Club, P.O. Box 1817, Cleveland 6, Ohio, to schedule them:

- 1. "Survival Perilous" and "Pheasant Island," two short films requiring 32 minutes to show. The first tells the story of the caribou; the second is a hunting picture taken on 10,000-acre Pelec Island in Lake Erie.
- 2. "Ring-Necked Pheasant" and "Small-Mouthed Black Bass," 31 minutes. The film on bass, with fishing pictures, follows the male and female from the time the nests are built on through egg-laying, hatching, and development of the fish until they have reached the size where they can take care of themselves.
- 3. "The Miraele of the Bees," 21 minutes. This film follows the bec through its life span and through its daily duties.
- 4. "Fishing Unlimited," 28 minutes. An all-fishing film, which includes parts of the "Striped Bass," "Shad," "Floating the Ozarks," "Snook," and "The Enchanted Mile."

Wildlife Food, Cover Provided On G. W. Forest

Experimental wildlife food and cover plantings have recently been completed on game management units on the George Washington National Forest in Alleghany, Highland and Rockbridge Counties, according to J. E. "Ned" Thornton, Virginia game commission supervising biologist.

Bush honeysuckle plants from the U. S. Soil Conservation Service were planted on Shaws Fork and Bratten Run Game Management Units, while 3,000 multiflora rose, 10 mulberry, 100 plum, 200 chestnut, 75 apple, 75 filbert, 100 crabapple and 25 bush honcysuckle plants were set out, wired and staked on the Dolly Anne, Potts Creek and Pedlar Units, he said. Some 3,000 pines were planted near the clearings on these same areas, he added.

Other wildlife habitat improvements made recently by the commission's game division field force include seeding 137 quarter-acre annual game bird mixture plantings on Camp Pickett and planting grass, clover and Korean lespedeza along 10.4 miles of logging road shoulders in the Union Bag-Camp Paper Corporation cooperative public hunting area in Brunswick County.

On the state forests, game commission personnel seeded 21 three-acre corn fields and plowed, fertilized and seeded 76 clearings with annual game bird mixture.

13 Bear Tagged In Research Project

Virginia game commission bear trappers have ear-tagged 13 black bear at Big Levels Wildlife Management Area in Augusta County since June 15, reports Allen Stickley, state game research biologist.

Highlighting the trapping and tagging project has been the recapture of two of the bear tagged in 1958, he said.

The tagged bear are released unharmed and the return of the tags by successful bear hunters will tell biologists how long bears live, where they travel, how many bear there are in the state and how hard they are being hunted.

Last summer, 26 black bear were tagged by Stickley's crews and 10 were known to have been bagged by hunters.

Retiring South Carolina Wildlife Head Sets Record

On June 30 A. A. Richardson retired as director of the division of game and fish, South Carolina Wildlife Resources Department, marking the end of 44 years of service—a record tenure for a game administrator in this country. James A. Webb, assistant director since 1953, succeeds Richardson.



Nottoway Publishing Co. Photo

According to Jomes D. Coleburn, editor of The Courier-Record of Blockstone, Vo., the 46-inch copperhead shown above was recently killed with a .22 rifle by Billy Jones of Nottoway County in the garage of his home. The reptile was in the process of swallowing a good-sized rot when killed.

Virginia

Dominion State, I love thee well, I love thee more than words can tell. I love the peace I've known with thee The thrill of life and liberty.

I love the things I've seen by day By field or stream or by the way, The busy farmer with his plough, Wild turkeys roosting on a bough.

Sleek cattle on a thousand hills, Broad bays and rivers, brooks and rills Where soft rains bless each fertile field And pregnant trees their bounty yield.

The whippoorwills that call at night And make me grateful for starlight, The mountains reaching to the sky That make me hold my head up high.

I see a deer or hear the tune
Of hound dog baying at the moon
Ah yes, I love thee Virgin State
God bless and keep thee, keep thee
great.

-Herbert Parker

Gabrielson Receives Honorary Degree

An honorary degree of Doctor of Science was conferred upon Dr. Ira N. Gabrielson, president of the Wildlife Management Institute, by Middlebury College at its June commencement exercises.

Gabrielson's citation read in part "Faithful to your chosen profession and ever dedicated to a cause profoundly significant to all who treasure the beauty and majesty of our forests and streams and the wildlife dependent upon them, you stand today the earnest advocate and the eminent authority in the field of conservation . . . a government carecrist who lived up to the highest traditions of public service and now, by your official title, the recognized guardian of an important national resource . . ."

During his more than 30 years with the Federal Government, Gabrielson rose through the ranks to become chief of the Bureau of Biological Survey and then the first director of the U.S. Fish and Wildlife Service which emerged from consolidation of the Biological Survey and the Bureau of Fisherics. He retired in 1946 to assume presidency of the Institute. Dr. Gabrielson has written hundreds of scientific papers and popular articles and is the author of four books and a co-author of two others. His latest is a monumental work, "The Birds of Alaska," written with Dr. Frederick C. Lincoln.

Soil Conservation Stamp Issued

Postmaster General Arthur E. Summerfield has announced that a soil conservation 4-cent postage stamp was issued on August 26, 1959, at Rapid City, South Dakota at the annual meeting of the Soil Conservation Society of America.

"This soil conservation stamp," Summerfield said, "should help focus public interest on the extensive soil conservation efforts being made by Federal and State governments, local soil conservation districts, watershed associations and other private and public groups. The issuance of 120 million of these stamps is in further recognition of the stake all of our people, urban as well as rural, have in the work of maintaining and improving the nation's vital natural resources of soil, water, forests and grasslands."



Dogwood Has Tiny Flowers

Many boys and girls are surprised to learn that the big white "petals" of the flowering dogwood are not the flowers of the tree at all; they are what the tree and flower experts call "bracts." The true flowers are in a little yellow cluster at the centers of the bracts.

These bracts are more like leaves than petals, but they are not green. like most leaves, and they do serve a very special purpose on the tree. They are a kind of advertisement for the tiny flowers. They attract the insects to the trees, and then the insects visit the real flowers.

Virginia's flowering dogwood has been the official floral emblem of the Commonwealth since March 1918 when it successfully edged out the Virginia creeper which lost the honor by just a single vote.

Every child should have mud pies, grasshoppers, waterbugs, tadpoles, frogs, mud turtles, elderberries, wild strawberries, acorns, chestnuts, trees to climb, animals to pet, hay fields, pine cones, rocks to roll, sand, snakes, huckleberries, and hornets—and any child who has been deprived of these has been deprived of the best part of his education.

Luther Burbank

Good Books

Animals are interesting in themselves, but baby animals can really steal the show. Robert M. McClung has written a book All About Animals and Their Young which is a fine piece of work from beginning to end. From the tiny amoeba to the giant whale, there is believe-it-or-not information about how they reproduce, how they prepare for their babies and how they care for

them or ignore them. Random House, 141 pp., drawings, ages 6-up.



As Lucos McCoin, "The Rifleman," TV stor Chuck Cannors has learned that safe handling of a gun is os important as goad markmanship. The former boseball player, whose adroitness with his Winchester 92 with its specially-mode lever is seen each week an TV, here displays the Ten Cammandments of Safety. Says Cannors, "All modern-day riflemen should obey these bosic tenets. It's cammon sense for all of us who hondle guns to know and follow them. Individuols and groups can obtain, free, quantities of the "10 Commandments af Safety" leaflet by writing to P. O. Box 1642, Richmand.

Charlotte Orr Gantz has discovered the fascination of the world outside as she writes about it in her first book, Discovering Nature. Here we find a woman who enjoys the outdoors in many respects: birds, butterflies, rocks and minerals, sea shells and land snails flowers and ferns. All this she writes about with great enthusiasm. Charles Scribner's Sons, 239 pgs., \$3.95, ages 15-up.

If you have thrilled to adventures in the outdoors with birds and animals, you must read The Audubon Book of True Nature Stories edited by John K. Terres. These are stories from Audubon Magazine by famous authors like Edwin Way Teale, Alan Devoe, Alexander Sprunt, Jr. and others. This is definitely a unique collection of some of the finest true nature stories ever written. Thomas Y. Crowell Co., \$5.00, 283 pp., drawings, ages 12-up.

Most people think that foxes are "no good." Well, perhaps they are destructive to our wildlife, but for some of their many good points, read Alice E. Goudey's new book, Here Come the Wild Dogs. Not only does the book cover the whole life history of the fox and its family, but the author goes into a brief introduction to other wild dogs, including the wolf and covote. Charles Scribner's Sons, 94 pgs., illust., \$2.50, ages 6-10.

We have all walked through the woods and seen a little red newt on the path. Who could miss this scarlet salamander? If you have ever taken one home or want to keep one, you will enjoy reading Little Red Newt by Louise and Norman Harris. This is a story of some of the adventures of a little red newt that found a home in a elassroom. Little, Brown and Co., 57 pgs., illust., \$2.75, ages 6-10.

As many stories have been told about snakes as anything alive, but most of them have not been true. For some reason or other, man has a deadly fear of these reptiles and legends have grown from this fear. For the truth about the snakes, read Snakes in Fact and Fiction by James A. Oliver. This book gives the many serpent hoaxes and the real truth about snakes around the world. The Macmillan Co., 192 pgs., illust., \$4.95, ages 14-up.

Have you decided what you are going to do or be when you get out of school? If you have been thinking about a job in the conservation field, by all means get the book Nature's Guardians by Harry Edward Neal. This book not only tells about the opportunities in conservation work but also gives guiding principles for selecting a profession in line with your interests, talents and education. Julian Messner, Inc., 173 pgs., illust., \$3.50, ages 14-up.

LETTERS AND COMMENTS

Letters of general interest are welcomed. They should be signed, but initials will be used on request.

Food Chain Spread Televised

I HAVE received the July issue of VIRGINIA WILDLIFE which begins our subscription. As a teacher and as a Virginian I find the articles to be of considerable interest. The "Camping in Virginia" article has given me some good tips for my next trip. The center spread on "The Stream's Food Chain" will provide me with excellent visual material for an upcoming television program dealing with biological interdependence. Thousands of fifth and sixth grade school children in Northern Virginia watch TIME FOR SCIENCE telecasts during the school year.

T. Darrell Drummond
Studio Teacher
TIME FOR SCIENCE
The Greater Washington Educational
Television Association, Inc.
Washington, D. C.

July Issue Enjoyed

MAY I say, July issue with beautiful cover, Gene Wood's wonderful composition on wildlife conservation and the back cover subscription ad with the bear and rabbit and the squirrel "hello" and their "thanks" is all most interesting and enjoyable.

Mrs. M. Josephine Rossi Baltimore, Maryland

Shotgun Article: Pro and Con

I WOULD like to comment on the article in the June issue of VIRGINIA WILDLIFE written by James R. Boldridge. I am sure Winchester and other manufacturers would quickly hire the "young man that put five rifle slugs from a carbine in the shoulder or even the three in the neck that two hands would cover on a running buck."

Printing articles with "malarkey" in them like that may cause you to lose circulation. Just how gullible do you think your readers are? In my opinion unless the deer was tied, the above is just about impossible.

John G. Lyonn Richmond, Virginia

CONGRATULATIONS on your fine article "On Hunting Deer With Shotguns." As a subscriber, I would like to have four copies of the June issue so that I may give this article to some friends.

J. S. Lewis, Jr. Goldsboro, North Carolina

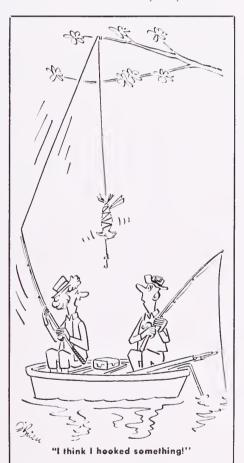
Outdoor Writer Comments

I HAVE just finished perusing your magazine, VIRGINIA WILDLIFE, and cannot praise it enough. The art work and covers are admirable, each

one a plu perfect masterpiece. The publication is not only breathtaking in format, the articles and stories reflect every phase of the outdoors in matchless style, bringing home the fact that the great state of Virginia takes second place to none in the outdoor field. Your June 1958 cover of an eastern chain pickerel by artist Duane Rayer is the finest ever done on this fish. It will be framed and occupy a prominent place on my wall.

Every conservationist should have Virginia Wildlife at hand; it brings the very essence of all outdoors to our living room. Thanks for publishing this masterpiece magazine.

S. Lee Pruitt, Member Outdoor Writers of America Baltimore, Maryland



Orchids for Kesteloo and Harrison

I HAVE enjoyed your wonderful magazine a lot, and personally feel that your staff writers rate with the very best in the country. Harrison and Kesteloo are without question the best outdoor photographers in the business, better than the boys that work for the larger regular outdoor magazines.

Hardin Gordon Richmond, Virginia

Alaskan Reader

ALTHOUGH we are now in Alaska, we still enjoy reading your wonderful magazine on Virginia. The covers are superb, the articles interesting and educational, also very informative on conservation practices we should all learn. My wife reads it from cover to cover every month.

M/Sgt. Russell E. Miller 1931st AACS Squadron

Magazine Helps Hunter

VIRGINIA WILDLIFE is the only magazine that I read and thoroughly enjoy every part of. Not only is it interesting but I find it extremely educational, and since I love to hunt, very helpful. Keep up the good work.

George K. Lambert
Mount Crawford, Virginia

Wants Larger Magazine

YOUR magazine is wonderful. The cover paintings are the finest that I have ever seen. I only wish that you would raise the price and enlarge the magazine.

Charles T. Williams McLean, Virginia

"It Satisfies"

I HAVE taken the Virginia Wildlife inagazine for two years now, and you don't know what a pleasure it is to have such a fine magazine coming into my home. Before I started the wildlife magazine I bought every sport magazine they had on the newsstand, but it didn't give me the satisfaction I was looking for. The Wildlife completes that desire.

James D. Browder Richmond, Virginia

Not Just a Man's Magazine

WHEN I subscribed to the Virginia Wildlife for my husband, I thought it was just another man's magazine. But, from the very first issue we received, I have always been the first to read it. I enjoy it very much.

Mrs. Richard Williams Fredericksburg, Virginia

Used by Scouts and 4-H Club

THANKS so much for such fine material in one small magazine. I have passed my copies on to "Den Mothers" and they use them in scout work. Now my daughter has joined 4-H club work and she is using them in her wildlife project.

Mrs. Nellie Paulette Appomattox, Virginia

